

### REMARKS

Claims 1, 8, 10, 11, 17, 19, 20, 26, and 31 to 46 are pending in the application, of which claims 1, 11 and 20 are independent. Favorable reconsideration and further examination are respectfully requested.

In the Office Action, the claims were rejected under 35 U.S.C. § 103 over U.S. Patent No. 5,299,302 (Fiasconaro) in view of Pedersen, "A Framework for Interactive Texturing on Curved Surfaces" (hereinafter "the Pedersen reference"). As show above, Applicants have amended the claims to define the invention with greater clarity. In view of these clarifications, withdrawal of the art rejection is respectfully requested.

Amended independent claim 1 defines a method of trimming a parametric surface. Prior to rendering the parametric surface, the method includes producing a trimming texture. The trimming texture comprises a texture map image representation of a trimming curve for the parametric surface. The trimming curve defines trimmed and untrimmed portions. The untrimmed portion comprises opaque pixels and the trimmed portion comprises transparent pixels. During rendering of the parametric surface, the method includes obtaining a list of polygons that define the parametric surface, and drawing the polygons to generate the parametric surface. Drawing the polygons includes applying the trimming texture to the polygons. The trimming texture is applied by texture mapping the trimming texture onto the polygons to produce the trimmed and untrimmed portions.

The applied art is not understood to disclose or to suggest the foregoing features of claim 1. Fiasconaro describes a trimming process the either renders or does not render polygons based

on their relationship to a trimming curve. More specifically, Fiasconaro generates ON or OFF flags indicating whether a vertex of a polygon is to be rendered based on the location of that vertex relative to a trimming curve (see, e.g., column 18, lines 10 to 32 of Fiasconaro, and column 6, lines 8 to 18 of Fiasconaro). This approach requires considerable effort on the part of hardware, since it requires that each vertex be checked for its location relative to the trimming curve. The invention of claim 1 reduces the amount of processing required to trim surfaces by defining a trimming texture containing trimmed and untrimmed portions comprised of transparent and opaque pixels, respectively, and applying the trimming texture during rendering when drawing the polygons.

As correctly indicated on page 3 of the Office Action, Fiasconaro does not disclose or suggest applying a trimming texture by texture mapping. Pedersen was cited to make up for this deficiency of Fiasconaro. Pedersen, however, merely describes a conventional texture mapping process that copies "patchinos" to a three-dimensional model. Pedersen, however, provides no disclosure whatsoever of trimming surfaces using the patchinos, much less using patchinos that include trimmed portions with transparent pixels and untrimmed portions with opaque pixels. Therefore, if Pedersen and Fiasconaro were combined in the manner suggested in the Office Action, the resulting hypothetical combination would still fail to disclose or to suggest the invention of claim 1. Even if this were not the case, Applicants submit that the combination of Fiasconaro and Pedersen is improper as a matter of law, and should not be made.

More specifically, it was said on page 3 of the Office Action that

It would have been obvious to one of ordinary skill in the art at the time of the invention to allow the trimming texture as disclosed in Fiasconaro to be applied to surfaces for rendering as disclosed in Pedersen to allow for interactive texturing and allowing for various effects in texturing techniques.

Applicants respectfully disagree. In this regard, it is elemental that there must be some motivation in the references themselves or in the knowledge available to those of skill in the art to combine two references in support of an obviousness rejection. Applicants submit that there was no such motivation here. More specifically, Fiasconaro's trimming system does not render polygons at trimmed portions. Thus, texture maps, such as those of Pedersen, could not be applied to Fiasconaro's trimmed portions (since there are no polygons in the trimmed portions to which the texture maps could apply). Conversely, because Fiasconaro's process actually causes some polygons not to be rendered, it could not be applied to produce texture maps, such as those of claim 1 (since part of the resulting texture map -- the trimmed portion -- would not be rendered). Since the combination of Fiasconaro and Pedersen would result in systems that were deficient or inoperable in some way, Applicants submit that there is no motivation to combine Fiasconaro and Pedersen in the manner suggested in the Office Action.

For at least the foregoing reasons, Applicants submit that claim 1 is patentable over the art. Amended independent claim 11 is an article of manufacture claim that roughly corresponds to claim 1; and amended independent claim 20 is an apparatus claim that roughly corresponds to claim 1. These claims, and the claims that depend from them, are also believed to be patentable for at least the reasons set forth above with respect to claim 1.

Each of the dependent claims is also believed to define patentable features of the invention. Each dependent claim partakes of the novelty of its corresponding independent claim and, as such, has not been discussed specifically herein.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney can be reached at the address shown below. All telephone calls should be directed to the undersigned at 617-521-7896.

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Please apply any fees or credits due in this case, which are not already covered by check,  
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Respectfully submitted,

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